"Ancient Life" Distance Learning Program:
Fossilization Game

TEACHERS PLEASE NOTE: this activity will be led by the ranger during the distance learning program. All you need to do is print the cards on page two and cut them apart so that each student has one of them.

School Subject Science
Grade Level $2^{nd} – 5^{th}$

Lesson Overview
Students will play a game to understand the fossilization process.

Lesson Objective
Students will understand the fossilization process and why some things get fossilized and some things don't.

Materials
- Fossilization cards

Procedure
1. Have students choose an *environment* in which there is a depositional setting such as a lake, pond, stream, swamp, desert, river, forest, or sea floor. The students can use their imaginations to describe this setting in as much detail as they desire.
2. Each student should then choose the role of an animal or plant that might inhabit the *environment* they have chosen (alternative suggestion: you can also put roles on cards and hand them out to the students). For example, in an aquatic setting, possible roles include not only snails, clams, fish, salamanders, turtles, alligators, and other aquatic animals, but also horses, deer, monkeys, rabbits, and birds that come to drink. Help students think of ways they could act out their animal or plant and how different roles might interact. For instance, a fish might wiggle and make gulping noises, a plant might grow or sway in the breeze or current, carnivores might chase predators, herbivores might nibble on plants, etc.
3. Have the students act out their roles. Each can be given a turn to make vocalizations or gestures. Students can also interact with each other as they might in their natural *environment*.
4. At a time determined by the ranger, the ranger yells "freeze" (or makes a noise with some kind of sound maker such as a whistle or duck call). "Freeze" means that the time for possible fossilization begins and all students must stop in their tracks. The teacher then has each student pick a card which will tell their fate. Use the cards below, make sure each student gets only one. If you need more cards, simply make a double set. Be sure that there are many more "destruction" cards than "fossilization" cards to represent the small chance of something being fossilized in the real world. Students can then act out the role of their demise or fossilization.
5. Discuss the meaning of this exercise. Have each student discuss his or her role as an organism and what happened to this organism after it died. On the blackboard, make one list of the organisms that were fossilized and another list of those that were destroyed. Remind the students that the only animals and plants future paleontologist will know anything about are the ones that become fossils. Discuss whether your list of fossils is a good representation of the living community they just acted out. Ask the students how this might affect the science of paleontology.

Extension (can be done as a post-program activity)
Play the game again with a new *environment*, this time asking a few of the students to pretend to be a paleontologist and leave the room before the new environment is decided. After the rest of the students have acted out their parts and then received their fate cards, have the destroyed plants and animals leave the scene. The "paleontologists" can then enter the room and examine the "fossils" (allow them to read the cards and ask what plant or animal the fossil was). The paleontologists should work as a team, taking notes of their findings and then trying to determine what the environment was. They can also make educated guesses as to what plants

and animals are missing from the fossil record. The rest of the class can tell them the answers after the paleontologists are done with their study.

Dry up	Dry up
Rot away	Rot away
Rot away	Eaten alive by an animal
Eaten alive by an animal	Eaten alive by an animal
Eaten alive by an animal	Eaten alive by an animal
Eaten by scavengers after death	Eaten by scavengers after death
Buried in sediment (mud, dirt, sand, etc.) – your harder body parts become a fossil!	Buried in sediment (mud, dirt, sand, etc.) – your harder body parts become a fossil!
Washed away by water	Washed away by water
Washed away by water	Washed away by water
You rot away but your imprint or track is buried in sediment (mud, sand, dirt, etc.) and becomes a fossil!	Rot away